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"THE LAND OF FLOWERS."

Bee-Keeping Thoughts, Observations and Experiences in South Florida.

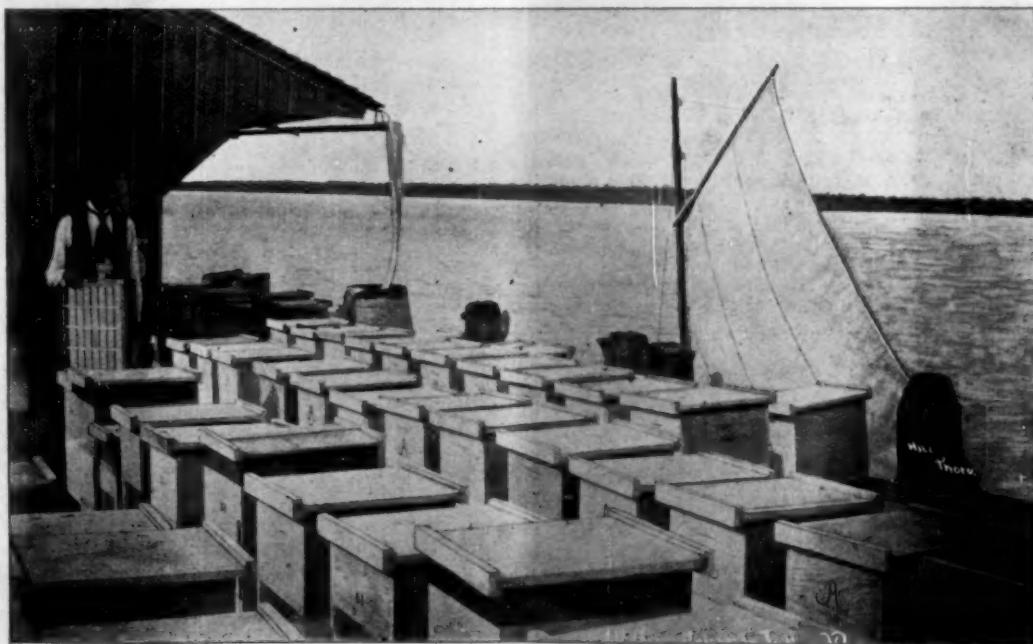
BY H. E. HILL.

[Continued from page 338.]

Last summer we moved a small apiary to the Indian River Narrows mangrove region, about 50 miles from Spruce Bluff. As previously noted in these columns, the mangrove

particular locality, and I decided to utilize an old, abandoned dock during my brief stay. A part view of this migratory apiary is herewith presented. The confined to such limited space, our only difficulty during six weeks' bee-keeping in the Indian river, arose from a general swarming-fever, which could be controlled only by a wholesale caging of queens within the hives.

Time and space at this time forbid relating at length many amusing circumstances incidental to the life of a migratory bee-keeper, in this most interesting country, some of which would rival Rambler's trip to Santa Catalina. We have no snow-capt mountains, burring deserts, gulches and precipitous canyons which echo the howl of coyotes, "where the lion roareth and the whangdoodle mourneth for his first born," but, the oft repeated, the charms of Florida, when coming from a northern winter, are intensified by each successive experience; the ice and snow have vanish, roses bloom by the wayside, and from amid the rustling leaves of stately palms feathered songsters of gaudy plumage send forth melodies as of gratitude for this glad rendezvous where winter blasts can never come. Mighty oaks, towering magnolias and sweet bay trees supporting massive festoons of Spanish moss,



Part View of a Florida Migratory Apiary.

failed to secrete in that locality last season, tho we secured some 500 pounds of comb honey, and 1,300 pounds of extracted, from cabbage palm, during our stay upon an old bulkhead adjacent to the islands. Owing to shoal water it was difficult to effect a landing near the islands. To this was added the fear of ants, which are very destructive in this

artistically draped by the hand of Nature, wave o'er head, swayed by fresh Atlantic breezes, as dancing rays of tropical sunlight through the foliage fall upon marble-white roads of sand and shell.

In January of last year I arrived in New Smyrna, 125 miles south of Jacksonville, where, in order to have my boat

and camping outfit which was necessary to convey me beyond the railway and steamboat lines to my destination, the north fork of the St. Lucie river, I was obliged to continue my trip southward 160 miles in my open skiff boat. While busily overhauling the rigging preparatory to starting by the first fair wind and tide, and meditating upon the long and lonely trip before me in strange waters—firmly resolved to improve the first favorable weather—officiating as captain, cook and crew, the even an apprenticeship before the mast is included in the long list of branches entirely neglected in my education—"Going for a sail?" came a familiar voice, and I readily recognized my interrogator and esteemed friend, Mr. Fred Whitaker, of Hawks Park, a steamboat engineer then temporarily off duty on account of an attack of rheumatism.

Upon acquainting my friend with my project, he immediately signified a desire to accompany me, saying he thought such a trip would be beneficial to his "rheumatiz." This proposition delighted me—I was to have a companion. I will not occupy space to elucidate my private thoughts regarding such a cure (?) for rheumatism, tho I exhort my faith in its efficacy, and perhaps cited a precedent or two just to avoid opposition to my friend.

That evening I requested my grocer to double my order, and to have the goods aboard by sunrise the following morning, as the indications were for fair weather (which prognostication proved equal to any forecast issued by Prof. Ira D. Hicks since he assumed charge of the weather), and we accordingly cast off on time, provided with water, provisions, guns, fishing tackle and ammunition sufficient for a small pirate ship; but, alas, we neglected to take on board a pilot, and the wending waterways, through thousands of mangrove islands, which for complex and delusive courses rival the catacombs of Rome, render travel extremely difficult to those unaccustomed to the locality. A succession of oyster-bars which traverse the entire length of the Hillsborough river, and are visible only at low tide, tend to increase the perils of navigation. After 15 miles of unnecessary travel, however, our first day out brought us safely through the Hillsborough across Mosquito lagoon, a sheet of water 6 by 20 miles in extent, and the Haulover canal, recently cut through by the East Coast Canal Company, connecting that body with the Indian river, afforded a safe harbor for the night.

As the sun sank from view we drew our little craft alongside an old shanty, probably the former abode of some lone fisherman. The camp-fire soon lent cheer to the scene as preparation was made for the evening repast, and the coffee-pot sang the old song that always recalls boyhood days in mother's kitchen. As the nocturnal shades closed upon us, flashes of lightning revealed the outline of dark clouds along the western horizon. Sunburned, tired and sleepy we spread our blankets upon the shanty floor, and, in the bony arms of Morpheus, all the cares and trials incidental to the struggle in providing diamonds for the city commission men temporarily fled; but, alas, we were soon, too soon, forsaken by the fickle god of dreams. In the midnight darkness I awoke beneath a veritable cataract. The howling wind, splashing waves, and rain beating through the open doorway; the heavy rumbling of the ocean surf breaking upon the beach, and roar of thunder added to the din and bewilderment of one thus rudely awakened. From a groveling object in the corner came an audible voice, which in accents not particularly "soft and low," discut the cruising cure for rheumatism. Sleep was impossible the remainder of the night, and the rough weather continued, making the outlook for progress very unpropitious.

After enduring the dampness of perpetual storm for 36 hours, and battling the waves for 10 more, we reached Titusville, 10 miles distant across the Indian river, with our blankets in six inches of water in the boat, as were also all our other effects.

The next morning old Sol shone with all the radiant glory of a tropical sun from a cloudless sky, and all Nature seemed gladdened and revived by the invigorating rains and the bright sunshine which comes after storm. After a refreshing night's rest and breakfast at the hotel we proceeded on our journey southward, going ashore each night to camp upon the river banks; always having provided fish, duck or oysters during the day, to fry or roast over the camp-fire at night.

Our trip occupied seven days, and when we arrived at the apary it was indeed a pleasant January scene; the bees whitening their combs and adding small bits of new comb wherever space permitted, which glistened with new honey from pennyroyal, upon which aromatic herb they were actively at work. Then, as often before and since, I sollicquized: Why do not more Northern people avail themselves of the advantages of Florida's genial climate and natural resources?

Brevard Co., Fla.

Wintering—Other Notes and Comments.

BY EDWIN BEVINS.

One of the colonies, in an 8-frame dovetailed hive, which was so outrageously strong last fall that I felt sure the hive did not and could not hold enough honey to winter the bees, I wintered successfully in the following manner:

When the time came for putting on chaff cushions, instead of putting on a cushion, I put on a super filled with unfinished sections of honey, and then pack over them. During the warm spell, late in January, I examined and found the honey had all gone somewhere, and refilled with 20 more unfinished sections. The bees were left alone till May 3, when I found them just cleaning up the last of those 20 sections. The bees appeared to be about as numerous as they were last fall, and seemed to be so altogether prosperous, contented, and lazy, that I thought it would be a good plan to give them something to do. I did not like to see so much bee-power going to waste. I put over them another hive-body filled with frames of heavy foundation. It was a marvel how soon that foundation was converted into comb.

ANOTHER ENTRANCE FEEDER DESCRIBED.

I fed some at the entrance in the evening. My feeder is a home-made affair which costs nothing, and will last forever and a day. Mr. Deacon says his will last forever. May be it will if it does not get broken. Mine will not break. I don't know as many readers of the American Bee Journal may care to know how this feeder is made, but for fear some one may be out of money and want a feeder, I will tell how it is done:

Get a piece of pine plank 2 inches thick, 6 inches wide, and 8 or 10 inches long. Nail some thin boards all around the edges of this piece of plank, letting them be of a width to project above the plank so as to form the sides and ends of a trough with the plank for a bottom. Then nail two strips bee-space thick on the side of the feeder that is to be placed against the hive end, and then between the upper ends of these two strips cut a bee-space out of the upper edge of the thin board. Then get another piece of pine plank 2 inches thick, and a little wider and longer than the feeder, which use for a cover. I smear the inside of these feeders with melted beeswax and rosin.

By varying the width of the thin boards forming the sides and ends of these feeders, they can be made of any desired capacity.

Put a piece of cheese-cloth on the feed, and no bees get drowned. I was simple enough one time to buy a Simplicity feeder, but that is too much of a toy affair for me, as was also one of Root's old, original dovetailed winter-cases. I have one of each standing around with nothing in the world to do.

HIVE-MAKING—VARIOUS SIZES.

I am congratulating myself just now that I am about to put the finishing touches to my hundredth hive. I do not mean to say that a hundred is all the hives I have, but I mean to say that I have made a hundred. This is nothing to boast of, but then I am tolerably well pleased over the fact that I have made them. My hives are not all made after a single pattern. Some of them are what are called "Dadant hives." The rest all have bodies 20 inches long, outside measure. I shall never vary from this length if I make a thousand hives. Most of my hives take 8 frames, but a good many are made to take 10 frames. Some 8-frame hives are 12 inches deep, but most of them take frames of standard depth. Some 10-frame hives take frames of same depth, but most of them have bodies 12 inches deep. These last-mentioned have telescope covers. Then I have made a few hives with bodies 7½ inches deep, the same length and width as the dovetailed hive. I shall put starters in the frames of these and use them to hive swarms on this season. The brood-chamber is contracted without the use of dummies. After the white honey-flow is over I shall put on hive-bodies of the same size, filled with frames of foundation, and let the bees build up; or, if necessary, I will feed up for winter. Next season I will manage these double hives as Dr. Tinker manages his. May be these experiments will pay, and may be not. I am willing to incur the expense for the sake of the knowledge.

NECESSARY TO FEED SOME COLONIES.

The spring has been an uncommonly poor one for early brood-rearing, and an uncommonly good one for making it necessary to feed—wet and cold most of the time. If it is not too late I would like to say to bee-keepers, get a move on, and see if some colony does not need to be fed right away. One warm day, not long ago, when bees were bringing in pollen at a lively rate, I found one strong colony that had suspended work of this sort. The frames were lifted, but there was not

a particle of honey or brood in them. Some feed has been given occasionally since, and now the work of gathering pollen goes merrily on.

HIVE CLAMPS AND RABBETS.

I omitted to say in the proper place that I buy all of my frames in the flat, and that I use metal rabbets and Van Deuren clamps for nearly all of my hives. I tried hive hooks, but prefer the clamps. I have almost come to consider the clamps and rabbets as indispensable parts of a hive.

PREVENTING SWARMING—PACKING COLONIES.

Some of those colonies in 8-frame dovetailed hives which were so immensely strong last fall, seem to be equally strong this spring. Since the advent of fruit-bloom some of the bees in some of these hives have had to camp out on the alighting-board over night. As I did not want any swarms to feed a month before the flow, I put on hive-bodies filled with frames of heavy foundation. Here is when and where I feel sure that the use of heavy foundation will pay. Not many swarms would be likely to issue anyhow, and in the meantime there would of necessity be an immense number of idle bees in the hive if not given the additional room.

Some readers will perhaps remember that I told them that I wintered a few colonies in big hives without any packing of straw around the hives. These hives were mostly double-boarded on the north and west, and I left them unpack in order to compare results in wintering with bees in hives of 8-frame dovetailed size packt as I usually pack them. The big, unpackt hives were all very low in stores at the advent of fruit-bloom, and one was entirely destitute. The well-packt colonies in the small hives have not had to be fed yet, but some of them may if this cool weather continues much longer. I shall pack everything after this.

It is satisfying in such a season as this to note the condition of the bees in the 8 and 10 frame hives having bodies 12 inches deep, and also in the 10-frame hives of standard depth. These hives were all well packt, and the bees have required no looking after, and will need none till it is time to put on sections.

Some writers on aparian subjects claim that a 10-frame hive is no better for wintering bees than an 8-frame hive, because, they say, the bees in a long, cold spell cannot move about to get the honey in the outside combs, and may starve with honey in the hive. This may be partially or wholly true in colder climates, and unpackt hives, but it is not true here—at least not true with me. I have lookt into some of my packt hives in quite cold weather, and never found the bees very closely clustered. Generally they were pretty well distributed between all frames. Sometimes I may conclude to protect the fronts of my hives with a packing of chaff. If I do, it will be by means of some device that can be easily removed when the coldest of the weather is over.

GETTING BEES INTO THE SECTIONS.

I read much about the trouble some folks have to get the bees to work in the sections. I have never had any trouble of this kind. I have had more trouble to get the bees out of the sections than I have had to get them in. Colonies are generally so strong that the bees are glad to get somewhere in a hot day, and they will not hang outside if you give them room above, and plenty of air.

A man about 10 miles away told me that he got no surplus from 10 or a dozen colonies in box and log hives last season. His surplus receptacles were air-tight boxes placed on top of the hives, and the communication was one inch, or less than an inch, auger hole through the cover of the hive. See? Those bees had good sense. Who would work for such a man?

Allow me to return to the subject of wintering bees in hives of different capacities. I would not be deterred from keeping bees in 8-frame standard hives because of the increased difficulty of wintering, over the trouble of wintering in hives that take deeper frames, or more of them. The trouble of wintering in this hive need not be great. The conditions for successful wintering in almost any kind of hive are few and obvious. Given a queen, warmth, dryness, air and a plenty of honey, or some good substitute, when and where it is needed, and your hives ought not to be without living tenants in the spring. Sealed covers are foes to dryness.

I believe that the 8-frame hive with frames of standard length and depth will always be largely used—perhaps more largely than any other, and yet I could not be persuaded to confine myself wholly to that size of hive. Variety is the spice of life, and there are some things I want to find out.

In reply to the question of Mr. Young (page 228), I will say that at the time of my visit to Omaha I did not know that

any such person existed. I am glad to know him now, through the reading of his "notes and comments," which I hope are "to be continued." I am waiting with some impatience for him to tell us about that hive foundation. When I go to Omaha again I shall consider myself invited to Mr. Young's, and shall make that journey of 22 miles to see him. I will notify him before hand of my coming, and then if he is not at home, it is not likely that I will call again.

Doolittle's old man is out in the same old garb, telling the same old yarn, in the same old bland, persuasive way.

Decatur Co., Iowa, May 17.



How to Avoid being Stung so Much.

QUESTION.—Why do bees sting some people more than others? Some tell me they can hive a swarm of bees, take away honey, transfer, or do any other thing necessary, and never use a veil or gloves, and never get stung. Now, I get stung every time I work with them, even with good veil and gloves on. This morning I lookt into a hive having a new swarm in it, and I received six stings before I could quietly replace the cover. Is there any way to avoid stings? I am not afraid of the bees, and like to work with them; but I should prefer not to get stung every time I go near them.

P. D. WINE.

ANSWER.—I know there is a sort of current impression, to the effect that bees will sting some people more than others. While this is true, it is not because they are able to recognize any peculiar physical condition or difference, nor is it because one person smells to the bees differently from another. It is because they notice a difference in behavior in different persons. For instance, Mr. A made a close study of the habits of bees, and particularly of the causes that induce them to sting. He recognizes that quick motions, under some circumstances, are quite liable to arouse the bees and make them sting very badly. There are certain things he can do with impunity, and others he can not; or perhaps, we had better put it this way: He can do anything with bees he desires; but if he works in a certain peculiar way he will get stung badly; but if his motions are regulated to their whims, he will get along with few or perhaps no stings.

Another man, Mr. B, is not afraid of bees, and does not care much whether he is stung or not. Perhaps he thinks a veil useless, and does not wear one; or may be he rips the cover off with a yank. He is clumsy in his motions. One bee stings him. He draws his hand back quickly, and receives half a dozen more. He does not know the importance of doing all things decently and in order. Smoker? Oh yes, he has one; but he uses it at the wrong time, and does not keep it on hand ready to quell any disturbance that is likely to arise.

Mr. A, on the contrary, observes that bees are crosser on some days than on some others; but if he must handle them on an "off day" (a cool day after a rain; a day when the bees have been robbing, or a day following a sudden stoppage of the honey-flow) he will first make sure that his smoker is in good order, and ready to give off a good volume of smoke. He will blow a little of it in at the entrance, and then pry the cover up a little very gently. As he does so he will send a stream of smoke into the crack made by the putty-knife or screw-driver. This drives down the guards, and then the crack is made a little wider, and more smoke is then driven in, when the cover is removed. If the bees show a quick, nervous movement, standing up high on their legs, bobbing their bodies quickly one way and then the other, he gives them a few more light whiffs of smoke until they are subdued. With a screw-driver he loosens the frames, holding the smoker in his hand. Just as soon as the bees stick their heads up, ready to show fight, he drives them back again, and then very cautiously and deliberately removes the first frame. His movements from now on are very deliberate; and occasionally when the bees are a little obstreperous he gives them another whiff of smoke. Only a very little is required—just sufficient to let them know that he is master, and that they must let him entirely alone.

Last spring I workt with the bees nearly a week before I received a single sting, and yet one of the boys who workt near me at the time, doing the same work, was stung anywhere from three to five times a day. Perhaps some may feel that these slow movements waste a good deal of time; but I find that I can really do more work in a day by closely and carefully watching any disposition on the part of the bees to resent my intrusion. Right here rests the whole secret. To one who is accustomed to handling bees there is a certain indescribable action on their part that shows when they are

ready to sting. A little smoke at the right time takes the "fight" all out of them.

I do not think it is good policy for one who handles bees very much to get stung a great many times, and one should be careful to avoid every sting as much as possible. In the summer, when the bees are working in the fields, one or two stings perhaps in the whole month would be all that I should get, *providing* there were nothing but Italians from imported stock, or of that persuasion; and how I avoid the stings is simply by following the plan laid down by Mr. A.

In this connection it might be well to state that one who makes a business of keeping bees is liable in years to come to experience some bad effects from too much of the apis-mellifica poison being injected into his system. The Rev. L. L. Langstroth, James Heddon, and others in later years experienced some inconvenience from what they ascribed to the presence of too much bee-sting poison in the system.

In regard to dispensing with a veil—yes, this can be done, but it doesn't pay. I have seen some of these same chaps boast of how they did not need any face protection; yet I have seen them waste valuable time in stopping to put the hands up to the face, or plunge the head in a clump of bushes in ignoble retreat.—E. R. Root, in *Gleanings*.



Real Cause of Foul Brood Among Bees.

BY WM. M'EVY.

Official Foul Brood Inspector for Ontario, Canada.

I have discovered the real cause of foul brood, and from experimental testing of my own I discovered the simplest and most practical way, with the least work, of curing that disease; and I have had more experience with foul brood than any other man on earth.

I will now give you evidence that would count in any court of law, and that any judge on the bench would accept, and charge a jury to believe, as they are solid facts.

One fine day in April, 1875, when my bees were flying freely, the bees of one colony all came out, and about two-thirds of them got into another before I got the hive closed. I then took the remaining third of the bees and the queen, and returned them to their own hive.

Then about sundown, when the bees had settled for the day, I examined the colony that swarmed out and lost two-thirds of its bees, I found plenty of honey, a nice lot of brood in all stages, but too small a cluster of bees to cover or care for the amount of brood. That colony having lost the most of its bees, the uncared-for brood died and rotted in the cells. Then by the middle of June that colony had developed into a genuine case of pure foul brood, which gave me many a day's very bitter experience before I got rid of it.

In the summer of 1882, Mr. C. J. Robinson, of Richfield, N. Y., originated foul brood in his own apiary, by forcing brood to consume their food mixt with rotten larvae. Mr. Robinson had some combs with brood in that were taken out of the hives at extracting time, and were not returned to the hives, through mistake. The weather being warm at the time, and the combs of brood being piled on top of each other in a building, the brood heated and soon became very rotten. Mr. Robinson then went to a colony of bees, took out a comb of brood, brushed the bees off, and then put the matter from the rotten combs into the cells that had brood in, and to force the brood to consume it he put a screen on each side of the comb, and then put it back into the hive of bees again. The comb of brood was kept warm by the heat of the colony, and the screen kept the bees from feeding the brood. Then the larvae was forced to consume the rotten matter, and then it became foul brood.

In 1888, the Rev. Mr. Gruetzner, of New Dundee, Ont., had foul brood originate in his apiary. In a letter I received from him, Mr. Gruetzner says:

"In the spring I placed entirely healthy combs of brood from other colonies into a weak but healthy colony; very soon the young died, intense heat set in, and the whole colony became full of foul brood. In Germany the opinion seems to be universal that diseased brood is the cause of foul brood."

In June, 1889, Mr. Wm. Burkholder, of Otterville, Ont., had foul brood originate in his apiary, from starved brood. Mr. Burkholder had a very strong colony of well-bred Italians, which consumed all their honey just a little before the honey season opened, and which he found in a dying state one morning. He fed them at once, and the majority of the bees came out all right again. All the brood in the colony had died at that time from starvation, and rotted in the combs. Then warm weather set in, and the whole colony became full of pure foul brood.

In June, 1890, Mr. Charles Urlocker, of Thorold, Ont., had 30 colonies of bees turned into foul brood from drowned brood. In June, 1890, Mr. Urlocker had 40 good colonies with a top story on each hive, and a queen-excluder on every brood-chamber. Just then a sudden storm started up, and a big cloud burst over Thorold, and for a time caused a terrible flood. Mr. Urlocker's apiary was in low land, the water rose very rapidly, and soon 10 brood-chambers were under water, and as the queens could not get up through the queen-excluders, they were drowned, as well as the brood. The water did not get quite up to the tops of the brood-chambers of the other 30 colonies, so the queens did not drown in them. The bees in nearly all went up into the top stories at the time. These colonies were very strong, and some had swarmed before that, and were full of brood when the flood overflowed the apiary. The water soon went down, extreme heat set in, and the brood-chambers full of drowned brood went into a great mass of corruption, and turned Mr. Urlocker's apiary into foul brood with a vengeance. In the *Foul Brood Bulletin*, page 14, Mr. D. A. Jones, of Beeton, Ont., says:

"A man once had a hundred colonies in an isolated locality, with no other apiary within miles of it, and no bees in the woods, as far as known; there were no signs of foul brood in his apiary all summer, tho the colonies were carefully examined once or twice each week. In August or September, a flood came and drowned a large portion of the brood in some of the hives; 10 or 15 of them were so much injured by the flood that the bees did not remove the dead brood, and in most of these colonies nearly all the combs were full of brood. The weather, after the flood, was very warm and muggy, the atmosphere very oppressive for days, with frequent showers. All the colonies from which the dead brood were removed came out all right, while the 10 or 15 from which it was not removed became very badly diseased; they attempted to rear brood, but some of it was affected, so much so that the odor arising from the brood dying was very unpleasant. When all the dead brood was removed, the disease continued, and it appeared that the spores of the disease were in the honey, as many of the larvae were found dead. Each time brood was reared the disease continued to increase, in spite of salicylic acid and other treatments then in vogue. Honey from the combs when given to a healthy colony produced the disease. It appeared in every respect like foul brood, and I feel satisfied that it was. Now, if it did not emanate from the decaying brood, which was a mass of corruption, where did it come from?"

Mr. John F. Gates, of Ovid, Erie Co., Pa., U. S., had foul brood originate in his apiary from his bees dwindling so badly one very backward spring that the bees could not cover or care for and keep warm the brood they had started during the early warm spell. When weather came in earnest, Mr. Gates examined his colonies and discovered that the rotting of the uncared-for brood had developed into foul brood.

Foul brood is a disease that is caused by the rotting of uncared-for brood. It usually originates in spring in weak colonies that have spring-dwindled so badly that they have not bees enough left to cover or care for all the brood, and if the spring keeps raw and backward the bees will crowd together to keep each other warm, leaving the uncared-for brood to die and rot in the cells. The brood covered by the bees in time hatches, which so increases the force of the colony that a wider circle of comb is covered by the bees taking in the space occupied by the decaying brood. Then the brood that is fed in these cells where brood lately rotted down, will have to consume their food mixt with the remains of decayed brood, and that is the whole, sole, real and only cause of foul brood.

In the bee-yards of beginners, over-worked farmers, and business men (whose time was fully occupied in other things) is where I found many a foul brood nursery. When brood has rotted and advanced to the brown-rotten-matter stage it is then a very dangerous thing, and if a large quantity of that is put in a weak colony it will start foul brood at once. The so-called scientists have done a terrible lot of damage by saying that the rotting or uncared-for brood could not cause foul brood; that sort of teaching has caused bee-keepers to be very careless, and when foul brood has broken out in their apiaries, it makes rapid headway because the owners did not take proper care of their colonies, but depended too much upon the so-called scientists who are not practical bee-keepers.

In the summer of 1890, Mr. John F. Gates wrote up the cause of foul brood, and had it published in the *Canadian Bee Journal*. When I read it I was greatly pleased to see that Mr. Gates had discovered in his own apiary that foul brood was caused by the rotting of uncared-for brood. I wrote Mr. Gates a letter at the time, thanking him very much for his valuable article on the cause of foul brood. He is just right on both the cause and cure of foul brood, and it will be a good thing

for all bee-keepers, that have foul brood in their bee-yards, if they will follow his instructions how to cure that disease, and let the professional guessers alone until they find out.

In the fall of 1890, I was very much pleased with an article that Mr. Robinson, of Richfield, N. Y., had published in the American Bee Journal, on the cause of foul brood, and as that was a real test case of his, proving that foul brood was caused by the rotting of uncared-for brood, I prized his article very much, as that was in the same line of my discovery. I wrote Mr. Robinson at the time I read his article, and also thank him for it.

Some bee-keepers believe that the empty hives that had foul brood in, will cause foul brood if not boiled, scalded, or disinfected, which is the greatest of nonsense. An empty hive never, no never, gave the disease, and never will. I always tell the owners not to waste their time in disinfecting or doing anything with the old hive, but cure the disease right in the same hive, which they always do.

Some think that the queens in very badly diseased colonies will cause foul brood, which I know is anything but a fact. I often have to put two, three, and sometimes four weak colonies into one, that have been so used up from foul brood, in order to get a fair colony to make it pay to cure them of foul brood. In such cases, if the queens suit me, I get them for nothing, and bring them home and do away with some poor queens, putting these queens from the foul colonies into my own. I have proved it in every possible way, and I know for a fact that the queens never did cause foul brood.

Comb foundation has been blamed for helping "to" spread foul brood, which is not a fact. I defy any man to cause foul brood from foundation made from wax rendered out of the worst of foul broody combs. The disease is spread by the bees robbing foul broody colonies, and they carry the disease just in proportion to the amount of the diseased honey they convey to their own hives.

In my next article I will give all my methods for curing foul brood. I don't use any drugs, nor starve any bees at any time, and any man can cure the worst cases of foul brood by my methods, from May to November. Ontario, Canada.



Importance of Having Good Queens.

BY J. W. ROUSE.

I wonder if even one-half of the bee-keepers realize the importance of good queens, as upon the queen more than any other one thing depends a successful crop of honey. I have never seen a season in my bee-keeping experience but what some colonies could at least make a living, but I have seen some colonies that made a poor living even in a fair season. As bees do not make honey, but gather it, of course they can do nothing when there is nothing to do on or with. If the queen is a good breeder, that does her work at the right time, in the right way, her bees are most sure to get something.

It is hard to convince some that there is as much difference in queen-bees as there is in milch-cows, or any other kind of stock. While some cows are good milkers, others are not worth keeping. So it is with queen-bees. Some colonies are kept from year to year, and nothing is ever obtained from them. When the old queen gives out, another is reared by the bees from her stock, and so this worthless breed is continued.

Remedy—Replace these worthless queens with good ones that will produce bees in quantities sufficient, and with energy enough to get a bustle on themselves.

If queens are to be bought, this is often neglected on account of the expense, but as has been said before, "If one does not wish to go to any expense, he had better let the bees alone." I do not know of any business that will bring in as good returns for the time and money as do bees if given the right attention. I have never failed to get some honey since keeping bees, except one season—that of 1894. That year by drawing on my best colonies, I kept some others from starving, which proved to me that it does not pay to keep a poor queen. Better let them starve rather than to keep them on that way. But by weeding out poor queens, the bee-keeper can very materially help his honey crop.

Again, many let their bees rear a large lot of useless drones that consume the stores the workers do get. This can be avoided by taking out all drone-comb from the brood-nest and replacing it with foundation or other worker-comb. This is another expense, but one that pays well for the investment.

By careful watching and proper manipulations one can have the bees build extra combs, by building a few at a time, but if one can stand the expense at the time, it is cheapest to have combs drawn from full sheets of foundation. This insures straight combs and all worker-cells, besides saving much honey building the combs.—Progressive Bee-Keeper.

CONVENTION PROCEEDINGS

Report of the North American Convention Held at St. Joseph, Mo., Oct. 10-12, 1894.

REPORTED BY LOUIS R. LIGHTON.

[Continued from page 342.]

WHAT SHALL WE PLANT FOR HONEY?

Silver Berry (*Elaeagnus argentea*) is quite a favorite with the bees. The plant grows wild from Minnesota to Montana and Utah, and has been introduced elsewhere for ornament and for its edible, berry-like fruit. A short account of it can be found on page 215 of the American Bee Journal for Aug. 16, 1894, under the name "Wild Olive."

The Japanese Silver Berry (*Elaeagnus longipes*) introduced by nurserymen is probably preferable to the native wild species. It produces a profusion of beautiful yellowish-white blossoms in May, and hangs full of bright scarlet acid berries, which like those of the native species may be used as cranberries. The Japanese species is a shrub five to six feet high, which bears when but two years old.

The Buffalo Berry (*Shepherdia argentea*) grows wild from North Minnesota to Colorado and westward, attaining a height of 5 to 18 feet. It is closely related to *Elaeagnus*, but while the latter has perfect flowers, four stamens, and alternate leaves, silvery below, the *Shepherdia* or Buffalo Berry has diocious flowers, eight stamens, and opposite leaves, silvery both sides, and the tree is somewhat spiny. The fruit is also glossier, bright scarlet and even more abundant. It is acid and can be used like the Silver Berries, but if left to be touched by frost it becomes very pleasant and can be used as a mid-winter dessert fruit. The Rural New Yorker says of it: "Unquestionably the *Shepherdia* is well worthy of cultivation for its fruit alone, which is superior to *Elaeagnus*." I have not been able to observe whether this plant is visited by the bees or not and so ought really to place it in the list for experiment, but from the fact that it is closely related to the silver berries I am quite sure it will prove of value to the bee-keeper and on account of its great beauty it can be used to replace non-productive ornamental shrubs, or may form a part of the fruit orchard.

The perennial clovers, White, Alsike and Red, with related plants such as Alfalfa or Lucern (*Medicago sativa*), and Sainfoin or Esparron (*Onobrychis sativa*) are great honey producers. I need say little about most of these, for all are familiar with them. I do not think, however, that Alsike clover (*Trifolium hybridum*) has received the attention it ought to have, either from bee-keepers or farmers. It thrives best on moist rich land and in a cool climate, but with care in getting a good stand, sowing it with timothy and red clover it may be grown on a great variety of soils in the North, and sown with redtop in the South, it will do well where the latter thrives. From the second crop of Red Clover (*Trifolium pratense*) Italian and Carniolan bees sometimes gather honey, but this source cannot be depended upon.

Sainfoin or Esparron (*Onobrychis sativa*) is a leguminous plant largely cultivated in Europe for forage and hay. It is raised to a limited extent in our Southern States, but is worthy I believe, of much more extended cultivation, altho it is not altogether hardy at the North. It has yielded a light crop as far north as Massachusetts, but it is liable to winter-kill considerably there. In the milder portions of the Atlantic States, and south of the Ohio, westward to the Pacific, it surely ought to succeed on light, dry soils which contain lime. It is a most excellent honey-producer and the honey is of fine quality—clear, thick, and pleasant-flavored. I shall sow some sainfoin in Maryland the coming spring and would be glad to see it tried in other parts of the country.

The Flat Pea or Vetchling (*Lathyrus sylvestris*) is a new leguminous plant which has come to us from Germany. It is one of the most remarkable renovators of the soil known, and the European journals of apiculture speak highly of it as a honey-producer. Its roots go even deeper into the soil than those of alfalfa, hence when once established it may be de-

pended upon to withstand the greatest drouths. It will also last for many years and withstand the severest freezing.

I expected to hear Mr. Terry, in his remarks to you about clovers, explain the manner, as near as this has been determined, in which these leguminous plants renovate the soil. Since some understanding of this may be of use to bee-keepers who are trying to raise some of these crops, I will state as briefly as possible the view generally accepted. It is as follows:

The roots of many leguminous plants not only go deep into the soil and bring the soluble salts to the surface where they are more available for other crops, but these plants also possess the power of taking quantities of free nitrogen from the air and fixing it as a part of their own substance. The manner in which they do this has been the subject of careful investigation in Germany, and it has been shown that the bulbous swellings, known as tubercles, on the roots of such plants are connected with the acquisition of nitrogen by these plants, and further that these tubercles are formed through the action of certain bacteria living in the soil. Moreover, it is probable that there are various species of bacteria peculiar to the different leguminous plants, as it has been found, in practice, that some clovers, as well as other Leguminosæ, put for the first time on a given piece of land do not always succeed at first, even tho' the land be good and the climate apparently favorable. But after the application of a light dressing—a mere sprinkling of surface soil taken from a field on which this particular crop had been successfully grown, and which, therefore, contained the bacteria peculiar to this plant—the latter was found to thrive in its new location. Also in some cases the bacteria, too few in number, multiply with continuous effort to raise the given crop, until at last success with it is possible. I mention this matter lest some, in trials of these crops for forage and as honey-plants, should conclude too hastily that a given one would not succeed in their location. It is also a very striking illustration of how a cause so entirely beyond the reach of the ordinary observer, may materially affect a certain practical result and lead to very erroneous conclusions. In our own special pursuit no doubt similar cases frequently occur.

The Carob (*Ceratonia siliqua*), whose long pods are sometimes called "St. John's Bread," is a leguminous tree growing in most Mediterranean countries whence its fruits are an important article of export. In Tunis, Italy, Syria, and Cyprus I found it yielding quite a little honey. It is a fine shade and ornamental tree besides yielding quantities of fruits which furnish very nourishing food for stock. Moreover, it grows on very rocky, sterile lands where no rain falls from April to November. It is worthy of extensive cultivation in the Southwest.

Asparagus (*Asparagus officinalis*) when left to go to seed blossoms during mid-summer and is visited by bees.

The European Chestnut (*Castanea castanea L.*) and the American (*C. dentata Marsh.*) and Japanese (*C. japonica DC.*) varieties are eagerly visited by the bees for honey and pollen in May or June, according to the latitude. The Japanese, being dwarf, bears early, even when but two to three years old, producing also very large nuts. The European variety (also known as Italian or Spanish chestnut) is said to do best in the Southwest.

Chinquapin (*Castanea pumila*) is the only other representative we have in the chestnut genus. It is a shrub-like tree which yields honey and pollen, as well as very sweet edible nuts about half the size of chestnuts. The nuts are salable, and the tree might be planted as a hedge or windbreak. It grows nearly everywhere in the South, but would doubtless prove hardy in the North also. I understand the Michigan Experiment Station has planted some. The objectionable feature it has, so far as I know—it is abundant near my apiary—is that it suckers immoderately from the central stool, but can be easily confined to this and is easily exterminated by removing the crown.

The Filbert or European Hazelnut (*Corylus avellana*) can be profitably grown wherever our wild hazelnut grows. Since they afford much early pollen for our bees I am glad to note that they are being planted by our horticulturists.

Chicory (*Chicorium intybus*) will grow readily in the United States. The root is dried and used as coffee or mixt with coffee. It is largely grown in Europe, being in Belgium a leading product. Five years ago that country sent about \$11,000 worth to America, while last year it sent us some \$130,000 worth, or more than ten times as much, and our annual importations of this product from all countries exceed one-third of a million dollars in value. European physicians recommend its use instead of coffee or mixt with coffee by those who have stomach troubles or whose nerves do not permit the use of coffee alone. Many prefer the taste of the bever-

age made from this mixture to that prepared from coffee alone. Since there is an increasing demand for this product, and the chicory plant is a good honey-producer, remaining in bloom during a good part of July and August, a handsome plant with its bright blue and abundant flowers, and stands drouth well, bee-keepers should be the ones to take advantage of the market and raise it.

(Continued next week.)

Questions and Answers

CONDUCTED BY
DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Uniting Weak Colonies.

What is the most satisfactory way to double up two weak colonies and make one strong colony? They are very weak, and one colony alone will not fill a tea-cup, but I think by doubling them I can make one strong colony.

I have just started, and have 16 colonies. I am deriving much good from the American Bee Journal.

LOUISIANA.

ANSWER.—At this time of year when bees are busy gathering there is no trouble whatever about uniting—just unite. Set one hive over the other and let them unite at their leisure, or lift frames and bees out of one hive and put into the other. If you have a preference as to queens, kill the poorer one a day or so before uniting. There will be less trouble about the bees going back to the old location if the bees that are to be moved have their queen killed a day or two before moving.

Bee-Keeping as a Business.

1. I am seriously thinking of selecting bee-culture as my pursuit in the near future. This is, however, not definitely settled, depending, among other things, upon my experience this summer, and your advice. I never paid any attention to bees until last summer, so I am altogether at a loss to select a suitable place—the first requisite for successful bee-culture. On the selecting of a location I would like more light. I therefore would like the benefit of your experience in selecting a location where bee-culture may successfully be practiced. I suppose California would be an ideal place, but I understand that competition is very sharp, and the market the poorest in the United States. I really have a preference for northwest Arkansas, but I do not know whether the flora there furnishes sufficient nectar. Some strawberries are raised there, and great apple-orchards are abundant—that is the end of my knowledge.

2. If one devotes himself entirely to bee-culture, with a capital of from \$500 to \$1,000, how should he invest it?

3. Should he depend upon the sale of honey and wax alone for his income?

4. Would it pay to have queen-rearing in connection with it?

5. What race is mostly in demand, and what is approximately the price at the different seasons for a tested queen of select breeding? Of course it differs materially whether I can sell 8 or 10 or 50 to 100 in one season.

6. What else might one do to make it pay? I do not mean to acquire wealth, but would expect pleasure and a comfortable living.

GERMANY.

ANSWERS.—1. To advise as to location is so difficult as to be fairly cast as impossible. What is best for one may not be best for another. There are some locations where the bee-keeper is practically shut out from all the world, and while one might endure it, another would rather saw wood for a living and be where he could see folks. Then there is the matter of health to be considered, and all locations are not equally healthy.

Rapid adjustments are all the time taking place, a specially favored locality being speedily filled with bee-keepers

enough to supply it, if not to overstock it. The ideal place would be one where nectar-bearing plants were abundant and continuous, a place where bee-keepers were still so scarce that much land remained to be possessed. It is self-evident that I don't know of such a place, for if I knew of it some one else would know of it, and candidates for its occupation would be prompt and active.

Probably your estimate of California is not far out of the way, and still if I were looking for a location I would figure somewhat on the possibility of working so hard and planning so well as to reap profit in any place where large crops were possible. I don't know anything about northwest Arkansas, and I don't remember seeing mention of it as a honey-producing region. That very fact makes it possible that it may be desirable. People go in flocks, like sheep, and it may be that the flock not having yet tended in the direction of Arkansas, there may be a good outlook. Where strawberries are raised and apple-trees are abundant, there is hope for bees.

On the whole you will probably find that advantages and disadvantages are so mixt up in different locations, a clear field being so much easier to find where honey-yields are moderate, that no one place has all the inviting features, and your own tastes and desires can alone help to make the proper estimate after you are on the ground. Indeed, it may be that what you would consider the most desirable location, all things considered, might be found on the same side of the ocean where you are now.

2. With that amount of money the investment would be mainly in bees and their hives, some part being needed for the necessary supplies and tools. The purchase of land for a permanent location would have to come later, unless in some location where land had little value.

3. It wouldn't do to depend for a living on the sale of wax and honey. A man should at least have enough ahead to support himself for two years, for it isn't so very uncommon to have two successive years of entire failure, and the line of years of failure might stretch out farther than that.

4. The field of queen-rearing is greatly overworked. To be successful, time, experience, and money in advertising must be freely used.

5. Probably more Italians by far than any other race are now demanded. A catalog before me gives select tested queen, January, February, March, \$8.00; April, May, June, \$2.50; July, August, September, October, \$2.25; November, December, \$2.50. But the number of such queens sold is exceedingly small—probably not one for every hundred untested sold for a dollar or less.

6. That depends altogether upon your own proficiency in any line. Nearly anything that you can remuneratively do can be worked along with bee-keeping. Poultry-raising might be mentioned as specially suitable.

Putting on Supers—Swarming.

What time should the supers be put on? Does it interfere with swarming? I would like to have all colonies swarm that will.

W. J. S.

ANSWER.—Putting supers on early has some tendency to prevent swarming. If you want to make sure that they shall swarm, let them be somewhat contracted for room. But this might be carried too far, and it isn't best to delay too long putting on supers.

Plans for Transferring.

1. I have a few colonies of bees in movable-frame hives that I wish to transfer into other and better frame hives. I to-day set a second brood-chamber filled with full sheets of foundation on top of two of them, with nothing between them, thinking they would move upstairs shortly. Can I reasonably expect them to do so, after which I will destroy the old inferior hive, or will I have to adopt some other plan, the Heddon plan, for instance?

2. If not that, how would the following plan do: After a week or 10 days, change places with the brood-chambers, putting the old one on top, shaking all the bees down into the other, then put between them a queen-excluder, allowing them to run in this manner for 21 days, then shake all the bees out of the upper hive and destroy it. If you know of any better plan, please tell it.

NORTHERN ILLINOIS.

ANSWERS.—1. This plan is not at all sure of being a success. One reason for this is that bees naturally put their stores above their brood, working downward. You're expecting them to work upward. With no excluder to confine the

queen above, you will probably not get the brood out of the lower story all summer. Even with an excluder, I've known queens to sulk—in one case for weeks—refusing to lay upstairs. On the other hand, it happens only too often, that queens will go upstairs and lay there when it is not desired.

The Heddon plan is used chiefly in transferring from box-hives, but there is no reason why it might not also be used with frame hives.

2. Your second plan is all right, and you needn't wait any 10 days, providing the colony is strong. At the end of three weeks you'll have honey to extract from the upper frames, with no brood in the way, unless it be a little sealed drone-brood.

If the colony is not strong (or if you had begun a little earlier in the season), a good plan is to take out of the old hive all combs not containing brood, filling up the space with dummies, setting the old hive on the new one, obliging the bees to use the new one for any entrance. Then as the colony needed more room it would of its own accord begin to occupy the frames of the lower hive with brood, when you could put an excluder between, making sure that the queen was in the lower story.

Honey Crowding Out Brood.

What ought I to do? I have 20 colonies, and about one-half of the hives are so full of honey that they have not room enough for brood. I have no extractor. J. T. K.

ANSWER.—One way of remedying the trouble is to get an extractor. Another is to take out one or more frames of honey from each hive, replacing with frames of foundation. Quite possibly, however, you may find the trouble correcting itself, for this time of year bees consume a large amount of honey in brood-rearing, and don't gather as fast as they use it.

A Beginner's Questions.

1. Last fall I "took up" a few colonies of bees, and put out the brood-comb, as there was some unsealed honey, for the other bees to clean out. Does that teach them to rob, as they went to robbing a short time after?

2. Will the hive that they robbed last fall do to put a swarm in this summer, as the comb looks clean?

3. Do bees rear a queen (in the spring) themselves when the old one dies in the winter?

4. How long does a worker-bee generally live?

5. May I come again?

V. E. H.

ANSWERS.—1. Yes, that would do something toward making them inclined to rob other colonies, providing there were others too weak to protect themselves, but it would not affect them at the present time to any noticeable extent. Probably not many engaged in the affair last fall are now living, and those that are still alive have not a vivid recollection of it.

2. Yes, it's all right.

3. If a queen dies in the winter, leaving no eggs in the hive, it is impossible for the workers to rear a successor. If she dies in early spring, before bees get to flying much, the bees may rear a successor from eggs or larvae present, but such queens are not likely to prove of much value.

4. A worker that first sees the light now, will live about six weeks. That is, six weeks is about the life of a worker during the season of busy work. They literally wear themselves out at work, and the less they do the longer they will live, within reasonable limits. Bees hatch late in the season live several months, continuing throughout the winter and helping to get work started the next spring. A queen lives usually two or three years, altho sometimes a 4-year-old may do good work, and in rare cases they may attain the ripe age of 6 years.

5. Yes, come on whenever you have some good, healthy questions.

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This is a pamphlet of 32 pages, giving complete instructions for breaking and educating colts, teaching horses to drive, and for use under the saddle, together with many instructions which have never before been published, and which are the result of the author's experience covering a period of 20 years. By Prof. Wm. Mullen, with whom the editor of the Bee Journal is personally acquainted. Price, postpaid, 20 cents; or given as a premium for sending us one new subscriber to the Bee Journal for the rest of the year at 50 cents.



GEORGE W. YORK,

Editor.

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Editorial Comments.

The Buffalo (N. Y.) Meeting of the United States Bee-Keepers' Union will be held Tuesday, Wednesday and Thursday, August 24, 25 and 26, 1897, the first session being at 10 a.m. of the 24th. This is during the annual meeting of the Grand Army of the Republic, when railroad rates will be low. Further information as to the hall, hotel rates, etc., will be given later.

We trust that there may be a grand rally this year at Buffalo. With the assured advantage of reasonable railroad rates, there ought to be a large attendance. Begin to plan now to go. You will have over two months to get ready in.

Retail Packages for Extracted Honey.—Mr. R. C. Alkin, in Gleanings for June 1, has an excellent article on the marketing of extracted honey, in which he truly says that there is really no popular retail package for it, as there is for syrups. He seems to lean toward the same idea that we advanced in the essay we read at the Wisconsin convention last February, namely, honey-producers will have to put up extracted honey in small tin receptacles—say pints and quarts—in order to induce a more general consumption of honey.

But the great difficulty to overcome is that of granulation. If any pure extracted honey could be retained indefinitely in its liquid form, the problem could the more easily be solved. But as that seems well-nigh impossible, perhaps the next easiest thing is to educate the people concerning the granulating tendency of pure extracted honey, and to get them to purchase only the candied article, and thus feel reasonably certain that they are getting the pure thing.

We experimented with pint and quart tin cans, with an

inch screw cap, costing respectively \$3.50 and \$4.00 per 100. Perhaps in lots of 1,000 these prices could be reduced 10 or 15 per cent. But the grocers objected having honey in tin, as it could not be seen as in glass. They rely principally upon its attractive appearance to make sales, and so they demand it put up in glass.

It will be a slow, hard job to make a success of selling honey in tin, and then we think it will have to be done by individual effort and education of the public. There are too many people who think that candied honey is only a kind of sugar.

Honey is so different from everything else, that it is utterly impossible to lay down any regular rule that can or will apply to it. Most people look upon it as a luxury, and until they are educated differently, we do not soon look for any sudden general or extensive demand for honey. Only time, and continued and untiring effort on the part of bee-keepers and honey-sellers will accomplish much, we think.

A Grand Exposition in Chicago will be held from next Sept. 25 to Oct. 16. It is to be called "The Illinois Manufacturers' Exposition of Home Products," and will be in the "Coliseum," the largest exhibition building in the world. No doubt reduced railroad rates will be obtained at that time, especially in Illinois and the near-by States.

A reader of the Bee Journal asks, "Why can't there be a meeting of the old Northwestern Bee-Keepers' Association about that time—say the second week in October?" We don't know any reason why there can't be. What do others say about it? We shall be glad to do all we can to perfect the necessary arrangements, in case it is decided to hold the convention.

Suppose all who are interested, and would like to attend such a meeting, just drop us a card to that effect.

The Simpson Honey-Plant is one that has been well recommended by those who have given it a trial. They say it is a real honey-plant. Mr. Geo. W. Williams, of Missouri, who has grown it extensively, has this to say about it:

EDITOR YORK:—While I do not wish to get into any controversy with any bee-keeper, and especially one as high in authority as Dr. Miller, still I would like to answer the inquiry of J. H. D., on page 294. Let me say to him, plant your $\frac{1}{4}$ acre of spare ground in Simpson honey-plant, and get four times as much nectar as any other plant in cultivation that I am acquainted with.

Dr. Miller says: "But $\frac{1}{4}$ of an acre of ground cannot be expected to do a great deal of good, no matter what it contains." Let us see. On that $\frac{1}{4}$ of an acre J. H. D. can set and grow 1,500 Simpson plants, and while I have not made a scientific calculation upon the average production of the plant, yet I place it at $\frac{1}{2}$ pound of honey to the plant, which would be a yield of 750 pounds of honey. When I say "plant," understand that I mean hill or bunch, for in setting a single plant it will stool, like pie-plant, and send up from two to six fine stalks from each hill, if properly cultivated.

When Mr. Root said: "One bloom of the Simpson honey-plant is equal to 100 basswood blooms," he put it very mildly.

It commences to blossom about the middle of June, and keeps a continuous bloom until a late hard frost cuts it off, and the bees work on it from early morn until dark.

Yes, by all means, plant that $\frac{1}{4}$ of an acre to the Simpson honey-plant, and watch the bees swarm after it. Of course, I am speaking for my latitude (Missouri), as I know nothing about what it will do in other places. I have been cultivating it for some time, and speak from experience. There are two kinds of it, and one is very much superior to the other.

GEO. W. WILLIAMS.

In a former communication, Mr. Williams wrote us as follows about this fine honey-plant:

It pays better than any other crop I can raise. I have it and sweet clover growing side by side, and, to use the boy's expression, the sweet clover "isn't in it" for honey. The early frosts that killed almost all other blooms does not affect

it, but it keeps right on "bearing" honey until it freezes. It will withstand more drought than any other plant, sweet clover not excepted. For best results, it should be sown in the fall, in seed-beds, like tobacco, and transplanted in rows about four feet apart, and cultivated a few times during the season.

We might say that we have arranged with Mr. Williams to furnish us some seed of the Simpson honey-plant in time for it to be sown next fall. The price will be, one ounce for 20 cents, or two ounces for 35 cents, postpaid. Or, we will send one ounce as a premium for sending us one *new* six months' subscriber for the Bee Journal at 50 cents, or two ounces for one *new* subscriber for a year, at \$1.00. Orders can be sent in any time, and they will be filled in rotation as soon as we get the seed from Mr. Williams, who will write an article describing fully just how to grow the plant, in time to be of use next fall.

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Honey-Lemonade.—Mr. C. Davenport, in Gleanings, speaks highly of the merits of lemonade made with honey. He claims a greater refreshing effect than from ordinary lemonade. He tells about it thus:

There is another way some honey can be very profitably used by bee-keepers, and that is by converting it into honey-lemonade, as occasion may offer.....As the people of our town celebrated the Fourth of July last year, I resolved to give the matter a trial that day. I was not able to leave home myself, but I got two young men in the neighborhood interested in the matter, and they were eager to try it on shares. We took a low wagon with a big hay-rack on it, and fitted a canvas top over it and to one side. The other side was left open except for a strip of canvas at the top, on which was printed in large letters of red and blue—"PURE HONEY LEMONADE."

I furnish a number of newly-built combs in brood-frames to hang up on the back side of the rack. Quite a display was also made of section honey, and extracted in glass of different sizes; a frame of bees with a queen, in an observatory hive, and two boxes with wire-cloth on both sides, containing bees, were also used to attract attention. The whole was decorated with evergreens, flags and flowers. I furnish a steady team so the boys could haul the "rig" around where the people were the thickest.

Before and after the Fourth we had some very hot weather; but the glorious Fourth was a cool, cloudy, even chilly day, compared with the weather just before; and on this account our sales were not what they would have been on a warm day. Many of the other lemonade stands did not pay expenses; but the boys gave me \$13.45 as my share of the profits on the sale of lemonade. The whole time the three of us spent in arranging the wagon was not over half a day. The lemonade was made just the same as any, except pure extracted clover honey was used to sweeten it instead of sugar. While I do not know that many would like its taste any better than that sweetened with sugar, it is certainly much more refreshing, and has a pleasant or stimulating effect. We used a large amount of it at our place last summer; and many of the neighbors who drank some, bought honey to make it.

In selling honey-lemonade at a public stand, those who buy it seem to notice its refreshing effect, and return for more. I believe it is a very healthful drink, and I am going to see if it will keep when bottled up air-tight. If it will, I intend to put some of it on sale this summer among druggists and grocers.

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GEORGE W. YORK, - Editor.
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United States Bee-Keepers' Union.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

MEMBERSHIP FEE—\$1.00 PER ANNUM.

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EUGENE SECOR, Forest City, Iowa.

Vol. XXXVII. CHICAGO, ILL., JUNE 10, 1897. No. 23.

Editorial Comments.

The Buffalo (N. Y.) Meeting of the United States Bee-Keepers' Union will be held Tuesday, Wednesday and Thursday, August 24, 25 and 26, 1897, the first session being at 10 a.m. of the 24th. This is during the annual meeting of the Grand Army of the Republic, when railroad rates will be low. Further information as to the hall, hotel rates, etc., will be given later.

We trust that there may be a grand rally this year at Buffalo. With the assured advantage of reasonable railroad rates, there ought to be a large attendance. Begin to plan now to go. You will have over two months to get ready in.

Retail Packages for Extracted Honey.—Mr. R. C. Alkin, in Gleanings for June 1, has an excellent article on the marketing of extracted honey, in which he truly says that there is really no popular retail package for it, as there is for syrups. He seems to lean toward the same idea that we advanced in the essay we read at the Wisconsin convention last February, namely, honey-producers will have to put up extracted honey in small tin receptacles—say pints and quarts—in order to induce a more general consumption of honey.

But the great difficulty to overcome is that of granulation. If any pure extracted honey could be retained indefinitely in its liquid form, the problem could the more easily be solved. But as that seems well-nigh impossible, perhaps the next easiest thing is to educate the people concerning the granulating tendency of pure extracted honey, and to get them to purchase only the candied article, and thus feel reasonably certain that they are getting the pure thing.

We experimented with pint and quart tin cans, with an

inch screw cap, costing respectively \$3.50 and \$4.00 per 100. Perhaps in lots of 1,000 these prices could be reduced 10 or 15 per cent. But the grocers objected having honey in tin, as it could not be seen as in glass. They rely principally upon its attractive appearance to make sales, and so they demand it put up in glass.

It will be a slow, hard job to make a success of selling honey in tin, and then we think it will have to be done by individual effort and education of the public. There are too many people who think that candied honey is only a kind of sugar.

Honey is so different from everything else, that it is utterly impossible to lay down any regular rule that can or will apply to it. Most people look upon it as a luxury, and until they are educated differently, we do not soon look for any sudden general or extensive demand for honey. Only time, and continued and untiring effort on the part of bee-keepers and honey-sellers will accomplish much, we think.

A Grand Exposition in Chicago will be held from next Sept. 25 to Oct. 16. It is to be called "The Illinois Manufacturers' Exposition of Home Products," and will be in the "Coliseum," the largest exhibition building in the world. No doubt reduced railroad rates will be obtained at that time, especially in Illinois and the near-by States.

A reader of the Bee Journal asks, "Why can't there be a meeting of the old Northwestern Bee-Keepers' Association about that time—say the second week in October?" We don't know any reason why there can't be. What do others say about it? We shall be glad to do all we can to perfect the necessary arrangements, in case it is decided to hold the convention.

Suppose all who are interested, and would like to attend such a meeting, just drop us a card to that effect.

The Simpson Honey-Plant is one that has been well recommended by those who have given it a trial. They say it is a real honey-plant. Mr. Geo. W. Williams, of Missouri, who has grown it extensively, has this to say about it:

EDITOR YORK:—While I do not wish to get into any controversy with any bee-keeper, and especially one as high in authority as Dr. Miller, still I would like to answer the inquiry of J. H. D., on page 294. Let me say to him, plant your $\frac{1}{4}$ acre of spare ground in Simpson honey-plant, and get four times as much nectar as any other plant in cultivation that I am acquainted with.

Dr. Miller says: "But $\frac{1}{4}$ of an acre of ground cannot be expected to do a great deal of good, no matter what it contains." Let us see. On that $\frac{1}{4}$ of an acre J. H. D. can set and grow 1,500 Simpson plants, and while I have not made a scientific calculation upon the average production of the plant, yet I place it at $\frac{1}{2}$ pound of honey to the plant, which would be a yield of 750 pounds of honey. When I say "plant," understand that I mean hill or bunch, for in setting a single plant it will stool, like pie-plant, and send up from two to six fine stalks from each hill, if properly cultivated.

When Mr. Root said: "One bloom of the Simpson honey-plant is equal to 100 basswood blooms," he put it very mildly.

It commences to blossom about the middle of June, and keeps a continuous bloom until a late hard frost cuts it off, and the bees work on it from early morn until dark.

Yes, by all means, plant $\frac{1}{4}$ of an acre to the Simpson honey-plant, and watch the bees swarm after it. Of course, I am speaking for my latitude (Missouri), as I know nothing about what it will do in other places. I have been cultivating it for some time, and speak from experience. There are two kinds of it, and one is very much superior to the other.

GEO. W. WILLIAMS.

In a former communication, Mr. Williams wrote us as follows about this fine honey-plant:

It pays better than any other crop I can raise. I have it and sweet clover growing side by side, and, to use the boy's expression, the sweet clover "isn't in it" for honey. The early frosts that killed almost all other blooms does not affect

it, but it keeps right on "bearing" honey until it freezes. It will withstand more drouth than any other plant, sweet clover not excepted. For best results, it should be sown in the fall, in seed-beds, like tobacco, and transplanted in rows about four feet apart, and cultivated a few times during the season.

We might say that we have arranged with Mr. Williams to furnish us some seed of the Simpson honey-plant in time for it to be sown next fall. The price will be, one ounce for 20 cents, or two ounces for 35 cents, postpaid. Or, we will send one ounce as a premium for sending us one new six months' subscriber for the Bee Journal at 50 cents, or two ounces for one new subscriber for a year, at \$1.00. Orders can be sent in any time, and they will be filled in rotation as soon as we get the seed from Mr. Williams, who will write an article describing fully just how to grow the plant, in time to be of use next fall.

Honey-Lemonade.—Mr. C. Davenport, in Gleanings, speaks highly of the merits of lemonade made with honey. He claims a greater refreshing effect than from ordinary lemonade. He tells about it thus:

There is another way some honey can be very profitably used by bee-keepers, and that is by converting it into honey-lemonade, as occasion may offer.....As the people of our town celebrated the Fourth of July last year, I resolved to give the matter a trial that day. I was not able to leave home myself, but I got two young men in the neighborhood interested in the matter, and they were eager to try it on shares. We took a low wagon with a big hay-rack on it, and fitted a canvas top over it and to one side. The other side was left open except for a strip of canvas at the top, on which was printed in large letters of red and blue—"PURE HONEY LEMONADE."

I furnish a number of newly-built combs in brood-frames to hang up on the back side of the rack. Quite a display was also made of section honey, and extracted in glass of different sizes; a frame of bees with a queen, in an observatory hive, and two boxes with wire-cloth on both sides, containing bees, were also used to attract attention. The whole was decorated with evergreens, flags and flowers. I furnish a steady team so the boys could haul the "rig" around where the people were the thickest.

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Now for New Subscribers for the rest of 1897: We would like to have each of our present readers send us at least *one new subscriber* for the Bee Journal before July 1, 1897. That surely will not be hard to do, when they will need to pay *only 50 cents* for the rest of this year. That is about 7 months, or only 7 cents a month for the weekly American Bee Journal. Any one with only a colony or two of bees should jump at such an offer as that.

Now, we don't ask you to work for us for nothing, but we will say that for each new 50-cent subscriber you send us, we will mail you your choice of one of the following list:

Wood Binder for the Bee Journal.....	20c.
50 copies of leaflet on "Why Eat Honey".....	20c.
50 " " on "How to Keep Honey".....	20c.
50 " " on "Alsike Clover".....	20c.
6 copies "Honey as Food and Medicine".....	20c.
1 copy each "Preparation of Honey for the Market" (10c.) and Doolittle's "Hive I Use" (5c.).....	15c.
1 copy each Dadants' "Handling Bees" (8c.) and "Bee-Pasturage a Necessity" (10c.).....	18c.
Dr. Howard's book on "Foul Brood".....	25c.
Kohnke's "Foul Brood" book.....	25c.
Cheshire's "Foul Brood" book (10c.) and Dadants' "Hand-ling Bees" (8c.).....	18c.
Dr. Foote's Hand-Book of Health.....	25c.
Rural Life Book.....	25c.
Our Poultry Doctor, by Fanny Field.....	25c.
Poultry for Market and Profit, by Fanny Field.....	25c.
Capons and Caponizing.....	25c.
Turkeys for Market and Profit.....	25c.
Green's Four Books on Fruit-Growing.....	25c.
Ropp Commercial Calculator No. 1.....	25c.
Silo and Silage, by Prof. Cook.....	25c.
Bienen-Kultur [German].....	40c.
Kendall's Horse-Book [English or German].....	25c.
1 Pound White Clover Seed.....	25c.
1 " Sweet ".....	25c.
1 1/2 " Alsike ".....	25c.
1 1/2 " Alfalfa ".....	25c.
1 1/2 " Crimson ".....	25c.
Queen-Clipping Device.....	30c.
The Horse—How to Break and Handle.....	20c.

We make the above offers only to those who are now subscribers; in other words, no one sending in his own 50 cents as a new subscriber can also claim a choice of the above list.

New Union and the Bee Journal.—In order to help our subscribers, and also the United States Bee-Keepers' Union at the same time, we have decided to offer a year's subscription to the American Bee Journal and a year's membership dues in the New Union, both together, for \$1.75. But it must be understood that in order to get this rate, all arrearages of subscriptions must be paid, and the \$1.75 rate to apply on advance subscription.

Now send us your orders, and we will attend to turning over the \$1.00 membership fee to the New Union, on each subscription to the Bee Journal as per the above offer. This ought to add 500 members to the New Union by June 1. If it does, our contribution will be just \$125.

Now, if you want to see the New Union succeed in its grand work, in the interest of all the bee-keepers, come on with your cash. General Manager Secor is just aching to do his part whenever he sees sufficient funds in the treasury to pay the bills.

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Back Numbers Since Jan. 1.—We are able to supply complete sets of the Bee Journal since Jan. 1, 1897, to any who may desire, at two cents per copy. There are a number of new readers who perhaps would like to get some of the first numbers of this year, to complete their volume for 1897. We shall be glad to furnish them as long as they last, at two cents each.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for \$1.10.

QUESTIONS & ANSWERS.

Conducted by Dr. C. C. Miller.

Peculiar Effects of Bee-Stings.

On page 230, G. S., of Utah, mentions the effect bee-stings have on him. The effects are worse on me; besides acting just as he describes, I sometimes, "as women say," faint away. Altho I have handled bees more or less for 20 years, I have not felt any great inconvenience until the last few years. A few nights since I had a severe cough in bed. I went downstairs and found a section of honey, partly cap. I took a part of three tea-spoonfuls, and it had the same effect on me that a sting has—feet tingling instantly, throat and lips swelled inside, and caused severe vomiting. I would be grateful if you, or some wise man from the East, could suggest a remedy, and thereby help a poor orphan. Would whisky have a counteracting effect on bee-stings as well as on snakes? I have never used it, and don't know.

BRITISH COLUMBIA.

ANSWER.—I confess my inability to help out, and will be glad if any one else will do so. I don't know about the whisky, but it might possibly serve bee-stings the same as snake-bites.

Keeping the Queen Out of the Super—Putting on Supers.

I produced extracted honey last year, having 7 colonies and 4 swarms, from which I took 1,025 pounds of extracted honey. This season I have made arrangements for producing comb honey with some of my colonies.

1. Will a queen enter a super filled with sections and lay there, if there is no protection? or must there be honey-boards or perforated zinc on top of the brood-frames to keep the sections clear of brood?

2. Which is better to put on a hive, one or two supers at the same time?

ANSWERS.—1. I allow my queens liberty to go into the sections if they wish, and once in a great while I find brood in a section, but it so rarely happens that I prefer not to use queen-excluders, notwithstanding I had enough excluders last year lying idle to furnish one to each colony. I know that some complain that queens go up into the supers, and I don't understand why their experience should be different from mine, unless it be that they don't use separators. Very likely a queen would trouble more about going up and laying in the supers if separators were not used.

2. Put on one super at first, and when that is half filled, or thereabouts, raise it up and put a second one under it.

Perhaps Bee-Paralysis.

I introduced an excellent queen to a queenless colony just in the opening of the honey season last year. She laid up nicely, I discovered a few days after the hatching of the first brood. There were some dead bees in front of the hive. I thought it might have been troubled by insects or robbers, but it was not, so I contracted the entrance. Bees continued dying. I examined the hive, and found a queen laying as usual. The combs were very well covered with bees, yet every day a dozen or two are to be seen dead, and to the present time the same, which is about five months now. It has seven frames of good combs, drawn from sheets of foundation. It never decreases, but the increase is thrown outside. I observed about four or six of them take hold of one and bring it to the ground. It is left there, where it dies. The dead ones are yellow all over except a little jet black at the point of the tail, whilst the others are regularly banded (yellow). The colony has brood and eggs, but about the same quantity of bees as when the queen was introduced.

JAMAICA.

ANSWER.—Perhaps paralysis. If so, you'll see the affected bees trembling all over, and the bees drag them out of the hive while still alive. The change of color is due to the fact that the plumage has disappeared from the sick bees, leaving the yellow and black parts more pronounced in color, and shiny. As yet no sure cure for paralysis seems to have been found, altho many cures have been announced.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Sorghum for Spring Stimulation.

Query 52.—Is cane sorghum a safe and desirable food to use for stimulative purposes in spring?—C.

Rev. M. Mahin—I think not.

P. H. Elwood—I do not know.

E. France—I would not use it.

W. G. Larrabee—I don't know.

Dr. J. P. H. Brown—It is poor food at any time.

J. A. Stone—I could not say, as I have never tried it.

J. A. Green—I should consider it safe, but have never tried it.

Prof. A. J. Cook—I think almost any food is safe then. Yes.

Chas. Dadant & Son—Hardly. We would prefer something better.

H. D. Cutting—I don't remember using it, and don't know much about it.

J. M. Hamaugh—I think not. I never used it, however, and am not authority.

G. M. Doolittle—It is doubtful about such "stimulative purposes" paying in average seasons.

Emerson T. Abbott—Better sell or eat the sorghum, and give the bees syrup made from granulated sugar.

A. F. Brown—I have never been able to get bees to take syrup of any kind other than that made from sugar.

Dr. C. C. Miller—It's safe to use almost anything when bees are flying every day, and desirable if bees seem to like it.

Eugene Secor—I don't know. If bees will use it from an open vessel in the yard, I don't believe it would do any harm.

Dr. A. B. Mason—I believe it would be safe, but whether it would be desirable or not will depend upon its quality and price.

R. L. Taylor—Bees could not be stimulated by sorghum in any way that I know. Syrup made from it, if good, would answer very well.

C. H. Dibber—I do not think cane sorghum either a safe or desirable food at any time for bees. Sugar syrup is much better and cheaper.

G. W. Demaree—Yes, when the bees are able to fly out every day or so. But my bees are awfully dainty and snuffy about taking sorghum!

J. E. Pond—I do not consider it a safe food for any purpose, and do not advise its use. Why use it, anyhow, at the present low price of refined sugar?

Wm. McEvoy—I have had no experience with sorghum. Don't stimulate in early spring in cold countries; unless you want to get one young bee for the loss of three old ones. Between fruit-bloom and clover is the right and only correct time to stimulate; if done then, and always in the evening, it will pay well.

Mrs. L. Harrison—I do not believe it pays to feed bees in spring, unless they are starving. A woman living near me was ambitious to have her colonies do better than mine. With this end in view, she fed them abundantly. At

Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

Low Prices Now!

We can furnish **White Alfalfa Extracted Honey**, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7½ cents per pound; 2 cans in one case, 7 cents; 4 cans (2 cases) or more, 6½ cents. The Cash must accompany each order. **Fine Basswood Flavor Honey** at same price; also in 270-lb. barrels.

• A sample of either honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polished on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equiped with best machinery, all combine to enable this firm to furnish the

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22Atf CHAS. MONDENG, Mgr.
Mention the American Bee Journal.

swarming time she confesses that her bees were not as populous as mine, that had not been fed. They are nosing around the feeders in lieu of going to the fields.

General Items.

White Clover Cheers Him.

White clover heads are coming out. How it cheers me to think I may have a honey crop after three years of failure.

GEO. F. ROBBINS.

Sangamon Co., Ill., May 22.

Wet and Cold Weather.

I wintered 40 colonies on the summer stands, and no loss at all. May was wet and cold, and bees are not doing much yet—not a swarm out. It is the first season that I have seen with no swarm in May.

C. W. LEARNED.

Wayne Co., Mich., June 2.

Good Season Expected.

The fruit-trees are all in bloom, but on account of the cold and rainy weather, the bees derive but little benefit from them. I lost three colonies to-day by spring dwindling. We have had three very poor honey seasons, but I expect a good one this year. I started four years ago with one colony; I bought a good bee-book and subscribed for the American Bee Journal, and now I am getting along all right.

M. P. HEESAKERS.

Brown Co., Wis., May 27.

Early White Clover Crop.

The honey season opens up bright in this locality, and the indications are that we shall have an early crop of white clover, which is the chief source here for comb honey; still, "there's many a slip," etc., you know, and we may have hot, dry weather in latter May and early June, that will burn the clover up completely.

J. E. POND.

Bristol Co., Mass., May 7.

Bee-Keeping in Southern California.

It is now a year and a half since we came to this part of the country, seeking health for both self and wife. I purchased a ranch of 164 acres about 10 miles east of San Diego, and lying on the upper side of the noted Sweet Water Reservoir. We are 7 miles from the Bay, and 15 miles from Old Mexico. Our ranch lies at the foot of the San Miguel mountains; some of it running up on the side of these mountains. Soon after coming here, as I could not find any bees to purchase, I took 27 colonies on shares—each party to furnish one-half of the supplies, and the proceeds in both bees and honey to be divided equally between us. Last year being one of the most extreme of the extremely dry seasons of this part of the State, I got neither increase nor surplus, and lost four colonies.

Having purchased 10 colonies, I started in this spring with 39 colonies. From these we now have 95 colonies, some half-dozen of which were double swarms, and the last two I have run back into the hives from which they issued. I am more anxious now for honey than any

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about six square rods of red clover that has been in bloom for the past two weeks; my Albino bees work freely on it, but not one bee of any other strain have I seen on it. I think they must have a longer tongue. The Albino bees and their crosses are taking the lead in my yard this season.

I notice some say stock won't eat sweet clover. All my stock eat it. I have been trying to seed a woodland pasture to it, but the stock won't let it grow.

J. D. GIVENS.

Dallas Co., Tex., May 25.

Hoping for Warm Weather.

Bees wintered well, only one being queenless out of 14, and it had a slight attack of bee-paralysis. I got a queen from the South, which seemed to put new life into the colony. They are doing well, considering the weather. It is very cool at present. I hope it will get warmer. My best yield of section honey from one colony was 136 one-pound sections, and it had about 50 pounds for winter, as nearly as I could judge. I have all the home trade for it that I can supply. I have been keeping bees since I was a small boy.

C. C. YOST.

Berks Co., Pa., May 29.

Cold and Wet Spring.

Bees wintered well, but the spring has been very cold and wet. Colonies have built up well, and showed signs of swarming, but now they seem discouraged, and have killed and dragged some drone-brood out of the hives. We hope for better weather before white clover blooms. We are prepared to handle all the swarms and all the honey our bees can store this year, and live in hope that we may secure a good crop.

F. C. MCCLAIN.

Mason Co., Mich., May 31.

Waiting for White Clover.

Bees are waiting for white clover; some are all ready to swarm. I opened a hive last Saturday and found queen-cells with eggs in them. The colony was very strong, and had brood in all 10 frames. It is dry and cold. A warm rain and warm weather will give good prospects.

W. M. RENNE.

Boone Co., Ill., May 31.

A Rainy Spring.

I do not know what to think of the season. It has rained about three days out of every four since I have been here (from Illinois). On this account I have had to feed my strongest colonies. The bee-keepers around here say we shall have a poor season. There is any amount of white clover around here that will be in blossom in a few days; but this rain—they say it is not going to stop. The bees were out for their first flight in five days to-day, and now it is raining this evening. Before I came here I hoped we would have a wet spring, but my hopes are more than realized. I have 24 colonies and 6 nuclei.

E. W. BROWN.

Erie Co., N. Y., May 30.

Bee-keeper's Guide—see page 350.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., May 6.—There is very little honey coming to the market, and fine lots of white comb brings 13c. Yet only a little is taken by the dealers, the season for it being over with the coming of strawberries, which are now plentiful. Extracted brings about late quotations, with beeswax in active demand at 27@28c. for best grades.

San Francisco, Calif., May 6.—White comb, 9-10c.; amber, 5-7c. Extracted, white, 5½c.; light amber, 3½c.; dark tule, 2½c. Beeswax, fair to choice, 25-27c.

New York, N. Y., May 20.—Old crop is well cleaned up, both comb and extracted, and our market is in good shape for new crop, which is now beginning to arrive from the South. It is in fairly good demand at 50@52c. per gallon for average common grade, and 55@60c. for better grades.

Beeswax is rather quiet at 26@27c.

Detroit, Mich., May 1.—Fancy white comb, 11@12c.; No. 1, 10@11c.; fancy amber, 9@10c.; No. 1, 8@9c.; dark, 7@8c. Extracted, white, 5@6c.; amber, 4@5c.; dark, 4c. Beeswax, 25@26c. Demand is slow for honey, and plenty in commission house.

Kansas City, Mo., May 20.—Fancy white, 12@13c.; No. 1, 11@12c.; fancy amber, 10@11c.; No. 1, 9@10c.; fancy dark, 8@9c.; No. 1, 8c. Extracted, white, 5@5½c.; amber, 4½@5c.; dark, 3½@4c. Beeswax, 25c.

Cincinnati, Ohio, May 7.—Demand is slow for all kinds of honey. Comb honey, 9@14c. for fair to choice white; extracted, 3½@6c. There is a fair demand for beeswax at 22@25c. for good to choice yellow.

Minneapolis, Minn., May 1.—Fancy white, 11@12c.; No. 1 white, 10@11c.; fancy amber, 9@10c.; No. 1 amber, 8@9c.; fancy dark, 7@8c.; No. 1 dark, 6-7c. Extracted, white, 6@7c.; amber, 5@5½c.; dark, 4@5c. Utah white extracted, 5@5½c. Beeswax, 23@26c. Market fairly steady for comb and better for extracted than for some time.

Philadelphia, Pa., May 1.—Fancy white comb, 12-13c.; fancy amber, 8-9c.; No. 1, 8c.; fancy dark, 7-8c. Extracted, white, 5-7c.; amber, 4-5c.; dark, 3½-4c. Beeswax, 25c.

Season is getting over for comb honey—very little demand. Extracted in good demand.

St. Louis, Mo., May 1.—Fancy comb, 12@13c.; No. 1 white, 11@11½c.; amber, 9@10½c.; dark, 7@8½c. Extracted, white, in cans, 6@7c.; amber, in barrels, 4@4½c; extra, 5c.; dark, 3@4c. Good demand for barrel stock—comb slow sale. Beeswax, 23@23½c.—prime finds ready sale at 23½c.

Albany, N. Y., May 1.—Fancy white, 12-13c.; No. 1, 11-12c.; fancy amber, 9-10c.; No. 1, 8-9c.; fancy dark, 7-8c.; No. 1, 6-7c. Extracted, white, 5-6c.; dark, 3½-4c.

Demand is all that could be expected at this season. Stock on hand small.

Indianapolis, Ind., May 1.—Fancy white, 14-15c.; No. 1 white, 12-13c. Extracted, white, 6-7c. Beeswax, 22-25c.

Demand is fair for grades quoted, but no demand for inferior grades.

Buffalo, N. Y., May 28.—The honey season here is about wound up for the present. There are a few stray sales of fancy at 10 and 11 cents, while common is selling at any price, quotable at 9@10c. No extracted of consequence here.

Boston, Mass., May 1.—Fancy white, 13-14c.; No. 1, 11-12c. Extracted, white, 6-7c.; amber, 5-6c. Beeswax, 25c.

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W. A. SELSER, 10 Vine St.

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WILLIAMS BROS. 80 & 82 Broadway.

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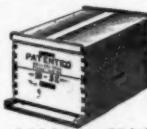
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for only \$1.50

I have on hand about 40,000 strictly first-class $4\frac{1}{4} \times 4\frac{1}{4}$ one-piece sections. For such sections the leading dealers are asking \$2.25 to \$3.00 for a single 1000; but I am anxious to turn these sections into money as soon as possible, and also anxious to increase my subscription list; therefore, as long as any remain unsold, I shall offer 1000 sections and the Review, to NEW subscribers, for only \$2.50.

I will also furnish a tested Italian queen and the Review one year, to NEW subscribers, for only \$1.50; or a Bingham Conqueror smoker and the Review for only \$1.75.

W. Z. HUTCHINSON, FLINT,
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Mention the American Bee Journal.

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Year

Dadant's Foundation

20th
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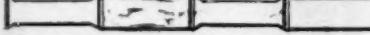
The Classic in Bee-Culture—Price, \$1.25, by mail.

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4⁴ SECTIONS 4⁴ SECTIONS



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2000 for	4.75	2000 for	3.75
3000 for	6.75	3000 for	5.25

If larger quantities are wanted, write for prices.

Price-List of Sections, Foundations, Veils, Smokers, Zinc, Etc.,
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